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AUTHOR Bauer, Barry Ralph
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ABSTRACT

An evaluation study was done (1) to compare the performance of adult high school diploma students and traditional students in three basic areas of skill development (vocabulary, language arts, and reading comprehension) and (2) to test the association between selected demographic variables and performance in these three basic skill areas. The comprehension and vocabulary sections of the Gates-MacGinite Reading Tests (Gates) Survey D and the language arts section of the Iowa Tests of Educational Development (ITED) were administered to twenty traditional twelfth grade high school students and twenty adult high school diploma program (HSDP) students. Conclusions were these: (1) There was no significant difference between the performance of the traditional high school seniors and the HSDP students in vocabulary, language arts, and reading comprehension as measured by Gates and ITED; (2) a strong correlation was not observed between these two student groups on selected independent variables (age, attendance, and employment) and the three basic skill areas; (3) there was a strong correlation between the two student groups on each of the selected dependent variables (Gates comprehension, vocabulary, and reading total; and ITED language arts skills and reading total) and the three basic skill areas; and (4) the HSDP is a viable alternative to the traditional high school program for many adults. (EM)

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THE UNIVERSITY OF MINNESOTA

A comparison of the performance of Adult High School Diploma Program students with graduating seniors in three areas of Basic Skill Development.

A Plan B Paper submitted to
the Graduate Program in Adult Education
Department of Curriculum and Instruction,
College of Education

Partial fulfillment of the
requirements for the
MASTER OF ARTS

by

Barry Ralph Bauer

Minneapolis, Minnesota

July, 1977

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ABSTRACT OF SUMMARY

The salient conclusions of this evaluation indicate the following:

1. There was no statistically significant difference between the performance of a group of graduating high school seniors and a group of High School Diploma Program (HSDP) adult students on three measures of achievement in Vocabulary, Language Arts and Reading Comprehension as measured by the Gates and ITED.
2. A strong correlation (above .40) was not observed between the tested association of a group of graduating high school seniors and a group of HSDP adult students on selected independent variables (age, attendance, employment) and the three basic skill areas. The highest correlation observed was between hours absent and Gates Vocabulary, and that was only .20 (see Table VII).
3. There was a strong correlation (above .40) between the tested association of a group of graduating high school seniors and a group of HSDP adult students on each of the selected dependent variables and the three basic skill areas, except ITED Language Arts and Gates Composition. The highest correlation observed was between ITED total and Gates Vocabulary (.63)(see Table VII).
4. The High School Diploma Program is a viable alternative to the traditional high school program for many adults. Adults can obtain equivalent scores in the three basic skill areas of achievement as measured through a High School Diploma Program.

The above conclusions suggest that HSDP adult students can learn and achieve as well as high school students; in fact, they have obtained at

least a minimal level of competency in Vocabulary, Language Arts and Reading Comprehension. Apparently, the additional experience obtained through just living aids him/her in developing and utilizing contextual clues at a higher level than the day-school student. The average HSDP adult student seems not to drop out of school because he could not learn, but rather for some other reason.

INTRODUCTION

One can define the adult learner as a person who is over the age of 16 and has social roles and responsibilities different from youth or children. These individuals have multiple pursuits involving work, family, community and individual interests. Thus, the adult has economic, domestic and citizenship requirements which claim his time and attention.

It is one of the unfortunate and startling facts of life in the United States today that, there are a vast number of adults without a high school diploma. Furthermore, while a high school education is becoming increasingly more important for basic economic survival, our educational institutions continue to have significant numbers of youth who "drop out".

In turn, we are failing to provide realistic alternatives to adults who would like to return to school to complete their high school diploma. Many states and communities seem to have the attitude that people deserve only one chance at education; that if one fails at or withdraws from high school the first time around, there is no use in expanding resources and effort in providing facilities and opportunities to a "proven failure".

The effects of these forces are a large number of adults who are ill-equipped to function in today's society, and an educational system that discourages adults to return to school to obtain a high school diploma or an equivalency certificate. If an adult is something other than a "large child", then alternative approaches to earning a high school diploma or an equivalency certificate would seem to be appropriate.

PROBLEM

The Mounds View High School Evening High School Diploma Program (HSDP) was initiated in February 1976 as a means of expanding educational options and opportunities for adults who reside and/or work in District 621. Persons over 16 years of age who dropped out of school for any reason and who have not returned to school are eligible for the HSDP.

The enrollment in the HSDP at the time of the study (May, 1976) consisted of 20 students. Their average age was 19.3 years. While more than one-half of the membership are persons between the ages of 16 and 18 who recently have left high school, the intended beneficiaries are adults over age 21 who possess no high school diploma. Willing adults are provided an opportunity to demonstrate their abilities to improve their skills and to earn a high school diploma. The HSDP also offers an alternative non-traditional program

that would combine work and continued schooling for the potential dropout. We feel this program, with the help of school counselors, teachers and administrators, will offer the identified dropout an alternative to terminating his/her secondary education.

The curriculum of the High School Diploma Program fulfills the State Department of Education requirements for necessary subject area credits and is tailored to meet the unique needs of each individual student. The objectives, motivations, abilities, prior experiences and personal situation of each student are kept foremost in mind as each student's program is developed.

This study was developed because we really do not know much about adult achievement and how that achievement compares with traditional secondary student graduates. We also have very little evidence to varify the importance of alternative high school diploma programs for adults.

RATIONALE

It is, therefore, now essential for the well-being of our society that adults have appropriate learning opportunities at the secondary level. In order to accomplish this, it is important that the adult returning to school be given a fair assessment of his chances to succeed and the necessary educational aids to see that this happens. It would also be important to verify to the adult learner and to the educational system that an alternative high school diploma or equivalency program enables the adult to obtain the competencies necessary for secondary certification.

The tests of General Educational Development (GED) have been found to provide a valid measurement (for a report on the normative studies, see examiners manual for the Tests of General Educational Development, high level) of their achievements and an opportunity to earn a high school equivalency certificate. For twenty years, the National Commission on Accreditation of Service Experiences has worked closely with State Departments of Education in establishing equivalency testing programs to which adult citizens, both military and civilian, may earn an equivalency certificate on the basis of the GED Tests. The GED Equivalency Certificates are widely accepted in lieu of High School Diplomas. Business, industry, civil service commissions and state and local boards of licensing examiners recognize them as meeting the requirements of high school graduation in job eligibility and promotion. Many higher educational institutions admit adults whose GED Test scores are consistent with admission requirements for high school graduates, accepting the scores in lieu of a full high school transcript.

An alternative to the GED Test, and one that is gaining in popularity and recognition, is an Adult High School Diploma Program (HSDP). The HSDP results in a high school diploma rather than an equivalency certificate. Therefore, the adult high school diploma student must fulfill the basic competency requirements that a school issuing the diploma would have for any graduating student. The uniqueness of the HSDP is that the time structure, materials, facility and teaching methods is directed specifically to the adult student.

An examination of the performance of HSDP and traditional high school students would be one indication of the achievement of the adult student relative to the traditional secondary student. Thus, this evaluation study was developed with two purposes in mind:

1. To compare the performance of adult high school diploma students and the traditional secondary student in three basic areas of skill development:
   a. Vocabulary
   b. Language Arts
   c. Reading Comprehension
2. To test the association between selected demographic variables and performance in the three basic skills area.

The three dependent variables selected for this study were skills that must be developed and assessed if adults are to obtain competencies included in high school diploma programs. The importance of reading comprehension, vocabulary and language arts to the successful completion of a high school diploma program is evident from the skills measured by the GED Tests:

A. Correctness and effectiveness of expression
B. Interpretation of reading material in the social sciences
C. Interpretation of reading material in the natural sciences
D. Interpretation of literary materials
E. General mathematical ability

The indeperdent variables selected for this study, those of attendance and employment status, are two variables that were felt to be significant when investigating the adult learner and the aims of the Adult High School Diploma Program. These independent variables are in contrast to the social roles and responsibility an adult has from youth and children.

To meet the objectives of this study, a variety of procedures was utilized. These procedures are listed in the following section.

PROCEDURES OF THE EVALUATION STUDY

Several different kinds of statistical techniques were utilized in this evaluation. A discussion of the selection of criteria for the population sampled, procedures for instrumentation and data collection and the design of this investigation are presented below.

Population

A total of 40 high school students was the sample of the present evaluation. The 20 students identified in Program 1 of this study were members of one of the twenty homerooms at Irondale High School. The homeroom was selected in consultation with the counseling staff as "being representative" of the 12th grade students at Irondale High School. The selection process was furthered by the students' willingness to participate and the coordinated efforts of their respective counselors. This group of students represented approximately five percent (5%) of the 1976 graduating class. On the other hand, the 20 students identified as Program 2 in this study represent the total enrollment of the HSDP. A detailed discussion of the demographic data collected on each subject can be found in Appendixes A and B.

PROCEDURES FOR COLLECTING DATA

Two instruments were selected to collect the data. The Comprehension and Vocabulary sections of the Gates-MacGinite Reading Tests (Gates) Survey D and the Language Arts section of The Iowa Tests of Educational Development (ITED) were administered to determine the levels of performance in Vocabulary, Language Arts and Reading of the 40 high school students identified in this study. Other data, such as attendance, and employment status,

were obtained from the students' cumulative folders and/or registration forms.

Since the Gates and ITED are the only sources of instrumentation in this evaluation study, a discussion of their respective attributes seems appropriate at this time. Survey D of the Gates-MacGinite Reading Test Series consists of two subtests -- a Vocabulary and a Comprehension Test. The Vocabulary Subject Test samples the students' reading vocabulary. It contains 50 test words; each is followed by five other words, one of which is similar in meaning to each test word. The student's task is to choose the word that means most nearly the same as the test word. The first items are composed of easy and commonly used words. Gradually the words become less common and more difficult.

The Comprehension Subject Test measures the student's ability to read complete prose passages with understanding. It contains 21 passages in which 52 blank spaces have been introduced. For each blank space a choice of five responses is offered. The student must decide which one of the five responses best conforms to the meaning of the whole passage. The first passages are simply written, but the latter ones become progressively difficult.

The ITED vocabulary subtests provide a measure of the student's knowledge of the meaning of a variety of words. The words included are commonly encountered in the reading of high school students.

The Gates and the ITED tests were selected in an effort to identify as precisely as possible the achievement levels of the high school diploma students. A major limitation of the Gates test is that it was designed for use in grades 4 through 6. Most students, adult and high school, read above the grade six level. In the future, the use of a higher level Gates test might be more appropriate.

PROCEDURES FOR ANALYZING DATA

The Statistical Package for the Social Sciences (SPSS) computer program was utilized to compute each of the various statistics implemented in the present investigation. The general format of this report follows the chronology of statistical analysis to which the data were submitted to the Cyber 75 computer at the University of Minnesota Computer Center. The variables observed included:

Independent Variables

1. Days Present
2. Days Absent
3. Employment Status
4. Last Year Attended in Day-School Program
5. Hours Absent from HSDP (adult students only)

Dependent Variables

1. Gates Comprehension
2. Gates Vocabulary
3. Gates Reading Total
4. ITED Language Arts Skills
5. ITED Reading Total

The statistical treatment of the data is presented and interpreted in the ensuing section entitled Major Findings.

The statistical techniques utilized in this evaluation included: Cross tabulation, t tests, Analysis of Variance, and the Pearson Product Moment Correlation Coefficient.

MAJOR FINDINGS

The discussion of the results of the analysis is organized in 6 sections: Cross Tabulations, Comprehension, Vocabulary, ITED Language Usage, ITED Reading Total, Days Absent.

Cross Tabulations

Table I and II present a frequency distribution of employment status by program. Table I indicates that 5 out of 20, or 25 percent of the Irondale students, had some type of paid employment. In comparison with Table II, 12 out of 20 or 60 percent of the HSDP adult students were employed. This is statistically significant to the .05 level (t value = 2.37), (see Table VI, pg. 9). In both programs, twice as many males as females were working at the time of this investigation.

The performance scores of the two samples are presented in Tables III, IV and V. The average age of the students in the present study was 18.6 years. As expected, the average HSDP adult student tended to be slightly older than the average high school student. For the HSDP adult group, the average age was 19.3 years (range 16-30), while the average high school student tested was 18.0 (range 17-19) years of age.

Comprehension

The average raw score obtained by the 40 students tested on the Gates Comprehension subtest was 46.1 (Grade Equivalent of 9.3) (see Table III). The HSDP adult students did slightly better than high school students tested on the Gates Comprehension subtest. The HSDP adult group obtained an average raw score of 46.5 (Grade Equivalent of 9.6) (see Table V); the high school group obtained an average raw score of 45.7 (Grade Equivalent of 8.7) (see Table IV). (In each of the preceeding cases, the Grade Equivalent score was converted from Tables V, VI, VII, VIII: Grade Norms - Survey D, Forms 1M, 2M, 3M, on page 16 of the Gates-MacGinite Reading Tests -- Teacher Manual.) When the mean scores obtained by the two groups on the Gates Comprehension subtest were subjected to the t test, no statistically significant difference was found (t value = -.45).

TABLE I

CROSS TABULATION BY EMPLOYMENT STATUS

IRONDALE

DATE OF TEST: MAY 18, 1976

	Count Row Pct Col Pct Tot Pct	Working	Unemployed	Row Total
Sex Female	1.	1 12.5 20.0 5.0	7 87.5 46.7 35.0	8 40.0
Male	2.	4 33.3 80.0 20.0	8 66.7 53.3 40.0	12 60.0
	Column Total	5 25.0	15 75.0	20 100.0

TABLE II

CROSS TABULATION BY EMPLOYMENT STATUS

HIGH SCHOOL DIPLOMA PROGRAM

DATE OF TEST: MAY 18, 1976

	Count Row Pct Col Pct Tot Pct	Working	Unemployed	Row Total
Sex Female	1.	4 44.4 33.3 20.0	5 55.6 62.5 25.0	9 45.0
Male	2.	8 72.7 66.7 40.0	3 27.3 37.5 15.0	11 55.0
	Column Total	12 60.0	8 40.0	20 100.0

TABLE III

DESCRIPTION OF ENTIRE POPULATION

DATE OF TEST: MAY 18, 1976

Variable		Mean	Std. Dev.	G.E.*
	Age	18.65	2.33	
Gates	Comprehension	46.12	5.91	9.3
Gates	Vocabulary	41.70	4.84	9.2
ITED	Language Arts	20.85	8.60	7.2**
ITED	Reading Total	24.12	8.06	7.6**
Days	Absent	20.80	21.43	

TABLE IV

DESCRIPTION OF IRONDALE STUDENTS

DATE OF TEST: MAY 18, 1976

Variables		Mean	Std. Dev.	G.E.*
	Age	18.00	.56	
Gates	Comprehension	45.70	7.02	8.7
Gates	Vocabulary	42.05	4.43	9.5
ITED	Language Arts	20.85	8.60	7.2**
ITED	Reading Total	23.35	6.69	7.5**
Days	Absent	8.20	6.98	

TABLE V

DESCRIPTION OF HIGH SCHOOL DIPLOMA PROGRAM

DATE OF TEST: MAY 18, 1976

Variable		Mean	Std. Dev.	G.E.*
	Age	19.30	3.15	
Gates	Comprehension	46.55	4.70	9.6
Gates	Vocabulary	41.35	5.31	9.2
ITED	Language Arts	20.85	8.60	7.2**
ITED	Reading Total	24.90	9.34	7.7**
Days	Absent	33.4	23.66	

* G.E. is an acronym for grade equivalent

** Converted by rounding to the nearest hundredth

Several conditions regarding interpretation and use of Grade Equivalent scores must be given. First of all, the grade scores in the norms are simply average values; they do not indicate how well a given student or group of students should read. For example, in an average ninth grade class that is tested, one-half the students will obtain Grade Equivalent scores above the mean and one-half will obtain Grade Equivalent scores below the mean. Secondly, the units of the Grade Equivalent scale are not equal to one another. A difference of one grade level between scores near the lower end of the scale is a larger difference than one grade level near the upper end of the scale. For this reason, it is not technically correct to add Grade Equivalent scores to obtain averages or subtract them to obtain grade scores or other differences in scores. Also, Grade Equivalent scores are not very useful for assessing a student's position to others in his grade as he moves through the grades.

Vocabulary

The average raw score on the vocabulary section of the Gates for the entire group of students tested was 41.7 (Grade Equivalent of 9.2). See Table III. High school students did slightly better on the vocabulary section of the Gates than the HSDP students; they obtained an average vocabulary raw score of 42.05 (Grade Equivalent of 9.1), while HSDP adult students obtained an average vocabulary raw score of 41.35 (Grade Equivalent of 9.2). The results of the *t* test indicate that the significance of these differences between the basic vocabulary of high school graduating seniors tested and adult students in the HSDP was not statistically significant (*t* value = .45).

ITED Language Usage

This portion of the Language Arts test is designated to indicate the student's mastery of many elements in correct and effective writing, including

TABLE VI

t TESTS BETWEEN SUB-POPULATIONS*

DATE OF TEST: MAY 18, 1976

Variable	Number of Cases	Mean	Standard Deviation	Standard Error	F Value	2-Tail Prob.	Pooled Variance Estimate T Value	2-Tail Prob.
Days Absent								
Irondale	20	8.2000	6.986	1.562	11.47	.000	-4.57	.000**
HSDP	20	33.4000	23.663	5.291				
Employment Status								
Irondale	20	1.7500	.444	.099	1.28	.596	2.33	.025*
HSDP	20	1.4000	.503	.112				
Age								
Irondale	20	18.0000	.562	.126	31.70	0	-1.81	.078
HSDP	20	19.3000	3.164	.707				
Gates Comprehension								
Irondale	20	45.7000	7.027	1.571	2.23	.089	- .45	.656
HSDP	20	46.5500	4.707	1.053				
Gates Vocabulary								
Irondale	20	42.0500	4.430	.991	1.44	.435	.45	.654
HSDP	20	41.3500	5.314	1.188				
Gates Reading Total								
Irondale	20	28.5500	5.781	1.293	1.30	.575	.58	.564
HSDP	20	27.5500	5.073	1.134				
ITED Reading Total								
Irondale	20	23.3500	6.699	1.498	1.94	.156	- .60	.550
HSDP	20	24.9000	9.341	2.089				

* 38 degrees or freedom

** Value of t for 40 degrees of freedom at .05 Significance level equals 1.684; at .01 significance level equals 2.457.

punctuation, grammar, capitalization, phrasing and organization of ideas. It is considered by the ITED test developers to be a compliment to, not a substitute for, evaluations of student compositions. The average raw score obtained by both groups of students tested was 20.85 (Grade Equivalent of 7.2). Consequently, no statistically significant difference existed between the high school graduating seniors and the HSDP adult students as far as Language Arts usage is concerned. Table III and Table IV indicate the performance of both groups in the Language Arts of the ITED was identical. Thus, there was no need to compute a t test on this variable.

ITED Reading Total

Six reading selections were included in this reading test. Two were characteristic of materials encountered in the social studies area, two were characteristic of reading matter drawn from the natural and behavioral sciences and two were distinctly literary in character. The designation of this test as a reading test and of its score as a measure of reading comprehension constitutes a convenient but possibly misleading simplification. Almost all questions require more than comprehension and restatement of the ideas presented in the passage. They demand, in addition, interpretation, analysis and interrelation of ideas. The student must make a critical evaluation of what he has read, using various approaches and techniques. In some exercises he is forced to draw from a background that is not totally related in the passage. The test, therefore, offers opportunity for the student to demonstrate mature, critical thinking. It aims at a high level of reading comprehension, not solely at the assimilation of ideas from the printed page. In short, it represents a definition of the objectives emphasized by the test authors more than a catalog of independent reading skills.

The ITED Reading Total score is more complex and comprehensive than the Gates Reading Comprehension subtest. It should, therefore, be expected that a student in both programs would have more difficulty with the ITED reading test than with the Gates reading test. (The reader should also keep in mind that Gates is designed primarily for use in the intermediate grades, while the ITED is aimed specifically at senior high school aged students.)

The mean ITED Reading Total score for all students tested was 24.12 (Grade Equivalent of 7.6). The HSDP adult students obtained a slightly higher score on this test than the high school students tested. The mean ITED Reading Total score for HSDP adult students was 24.90 (Grade Equivalent of 7.7), while the high school students tested obtained a mean Reading Total score of 23.35 (Grade Equivalent of 7.5). However, the results of the t test for these mean scores indicate that the difference between the mean ITED Reading Total scores was not statistically significant ($t = -.60$) (see Table VI).

Days Absent

Table III presents the days absent variable which represents prior attendance or the number of days absent during the last year in attendance in a day-school program. The mean number of days absent for the 40 students tested was 20.80 days. However, the standard deviation of 21.43 indicates that much variance exists among those students observed in this evaluation. A review of Tables IV and V reveals that during their last year in attendance in the day-school program, the HSDP adult students were absent at a rate of more than four times the number of days recorded absent for the high school students observed. Table IV indicates that the days absent for HSDP adult students was 33.4, while the mean days absent for the high school students observed in the evaluation was only 8.2. Table VI indicates that the mean differences between the two groups of students for days absent was

statistically significant (t = -4.57). However, it should be pointed out that the present attendance of the students in the HSDP is nearly perfect (see Appendix B, pg. 20).

SUMMARY

In summary, slight differences in the mean scores were found to exist between the high school graduating seniors tested and the HSDP adult students in 4 of the 5 test variables observed. The one exception occurred in Language Arts usage, where both groups obtained a mean score of 20.85 (Grade Equivalent of 7.2). The two statistically significant differences in mean scores observed between the two groups were employment status and days absent during the last year in attendance in the high school program.

ASSOCIATION BETWEEN SELECTED DEMOGRAPHIC VARIABLES

The Pearson Product Moment Correlation Coefficient technique was utilized to determine the relationship or the association between age, sex, days absent, hours absent, ITED subtest scores (Language Arts and Reading total) and three subtests scores on the Gates Reading Comprehension, Gates Vocabulary and Gates Reading Total. Table VII presents the results of these computations. A review of this table indicates that the coefficients of correlation between the variables listed average about .21 and ranged from about -.06 to .64. Coefficients near zero suggest that the variables bear little or no consistent relationship to each other. Where the correlation between two variables is above .40, we have a good indication that a consistent relationship or association exists between them. A fairly strong relationship (above .40) was determined between ITED Language Arts and the Gates Vocabulary score and the Gates Total score, .61 and .54 respectively. In each case the significance level was beyond .05. Each of the correlation coefficients between ITED Reading total score and the respective subtests

TABLE VII

PEARSON CORRELATION COEFFICIENTS

DATE TO TEST: MAY 18, 1976

(N = 40)

	Gates Comp.	Gates Voc.	Gates Total
Age	-.0616	-.0095	.0421
Sex	-.0249	.0201	.0081
Days Absent	.1659	.1076	.0764
Hours Absent	-.0014	.2035	.1389
ITED Language	.3283	.6194	.5422
ITED Total	.4650	.6375	.4930

of the Gates Reading Test was above .40: .46 (Gates Comprehension): .63 (Gates Vocabulary) and .49 (Gates Total). In each case the significant level was beyond .05. No correlation (above .40) existed between age, sex, days absent or hours absent and the three Gates subtests. The two strongest associations were seen between ITED Total and Gates Vocabulary (.63) and ITED Language Arts and Gates Vocabulary (.61).

This suggests that the vocabulary sampled by the Gates Vocabulary subtests may be necessary and critical to successful performance on the ITED. It also suggests that you can use a student's score on any of the various Gates Reading subtests to predict how well he/she will do on the Language Arts and Reading subtests of the ITED.

SUMMARY

In summary, this evaluation study was developed with two purposes in mind:

1. To compare the performance of Adult High School Diploma students and High School Seniors in three areas of basic skills development:
   a) Vocabulary
   b) Language Arts
   c) Reading Comprehension
2. To test the association between selected demographic variables and performance in the three basic skills areas

VARIABLES OBSERVED

Independent Variables

1. Days present
2. Days absent

3. Employment status

4. Last year in attendance in day-school program

5. Hours absent from HSDP

Dependent Variables

1. Gates Comprehension

2. Gates Vocabulary

3. Gates Reading Total

4. ITED Language Arts Skills

5. ITED Reading Total

A total of 40 high school students was the subject of the present evaluation: 20 graduating seniors from Irondale High School and 20 Adult High School Diploma Program students. In general, t tests were computed between the mean scores of each of the two groups of students on the respective variables. To meet these objectives four statistical procedures were employed: Cross Tabulations, t Tests, Analysis of Variance, and the Pearson Product Moment Correlation Coefficient.

In general, slight, but not statistically significant, differences in the mean scores were found to exist between the graduating seniors tested and the HSDP adult students on two variables: Vocabulary and Reading Comprehension. For one variable, Language Arts, both groups obtained a mean Language Arts score of 20.85 (Grade Equivalent of 7.2).

The two statistically significant differences in mean scores observed between the two groups were (1) employment status and (2) days absent during the last year in attendance in the day-school program (see Table VI). In testing the relationship among dependent and independent variables, the highest correlation observed was between hours absent and Gates Vocabulary, and that was only .20 (see Table VII). Essentially, this means that the independent variables observed in this evaluation study do very little toward explaining variance in student performance on the Gates or the ITED.

In testing the relationship among the dependent variables, the two strongest associations were seen between the ITED Total and Gates Vocabulary (.63) and ITED Language Arts and Gates Vocabulary (.61). This suggests that the vocabulary sampled by the Gates Vocabulary subtests may be necessary and critical to successful performance on the ITED. It also suggests that you can use a student's score on any of the various Gates Reading subtests to predict how well he/she will do on the Language Arts and Reading subtests of the ITED.

IMPLICATIONS

Two limitations must be mentioned as we proceed to discuss the implications and recommendations of this evaluation:

1. The sample of students tested at Irondale High School was not a random sample of all graduating seniors in Mounds View School District #621.
2. No pretests were administered. Thus, we are unable to identify initial differences between the two groups before participation in the evaluation.
3. Better measurements appropriate for the adult learner need to be developed and utilized.

In spite of these limitations, this evaluation report has some important implications for curriculum development at both the program and district office level.

The salient conclusions suggested by this report are that:

1. There was no statistically significant difference between the performance of a group of graduating high school seniors and a group of HSDP adult students on three measures of achievement in vocabulary, language arts and reading comprehension as measured by the Gates and ITED.

2. A strong correlation (above .40) was not observed between the tested association of a group of graduating high school seniors and a group of HSDP adult students on selected independent variables (age, attendance, employment) and the three basic skill areas. The highest correlation observed was between hours absent and Gates Vocabulary and that was only .20 (see Table VII).
3. There was a strong correlation (above .40) between the tested association of a group of graduating high school seniors and a group of HSDP adult students on each of the selected dependent variables and the three basic skill areas, except ITED Language Arts and Gates Composition. The highest correlation observed was between ITED total and Gates Vocabulary (.63) (see Table VII).
4. The High School Diploma Program is a viable alternative to the traditional high school program for many adults. Adults can obtain equivalent scores in the three basic skills areas of achievement as measured through a High School Diploma Program.

The above conclusions suggest that HSDP adult students can learn and achieve as well as high school students, in fact, they have obtained at least a minimal level of competency in Vocabulary, Language Arts and Reading Comprehension. Apparently the additional experience obtained through just living aids him/her in developing and utilizing contextual clues at a higher level than the day-school student. The average HSDP adult student seems not to drop out of school because he could not learn, but rather for some other reason.

RECOMMENDATIONS - SUGGESTIONS FOR FURTHER RESEARCH

It is recommended that this evaluation study be duplicated and expanded in the ensuing school year to include all HSDP adult students in District 621

and other students in similar programs throughout the north suburban area. The proposed study would also have to include a comparable number of graduating seniors from the two traditional programs in the Mounds View School District #621. Such a study could provide us with useful information about the learning styles of high school dropouts and potential dropouts. It could also help us identify crucial factors associated with successful adult completion of a High School Diploma Program. As stated earlier in this paper, efforts need to be continued to identify an instrument that will adequately measure the reading achievement level of the adult learner. One test already identified as a possible instrument to meet this objective is the Adult Performance Level. This instrument might be used to test the following hypothesis and/or answer the following questions:

H_1 There is a positive relationship between Vocabulary and Language Arts.

H_2 There is a positive relationship between Vocabulary and Reading Comprehension.

H_3 There is a positive relationship between Language Arts usage and Reading Comprehension.

H_4 There is no statistically significant difference between high school students and HSDP adult students in Vocabulary, Language Arts and Reading Comprehension as measured by the ITED and/or APL.

Q_1 If we control for initial differences on student (antecendent) variables, what differences will be indicated in Vocabulary Development, Language Arts and Reading Comprehension?

Q_2 Is the Adult Performance Level test appropriate for measuring the three basic skill areas discussed by this paper?

Conclusion

It is not likely that adult education programs will be able to escape from the administrative bonds of marginal organizational existence for some time to come. Such a change would take major legislative or constitutional changes in many states. Adult education programs will not likely be funded on other than an enrollment economy basis for some time to come; as long as local educational funds are scarce and state and federal sources rely on attendance figures as an indication of program success (and what other indication, do they have?). What is necessary, however, is that adult educators escape from the bonds imposed by these administrative considerations and seek to avoid making philosophical, pedogogical decisions in reaction to them. Adult education program decisions tend to be made in reaction to conditions, demands or assumptions made by other groups of people or institutions. In general, there exists no curriculum philosophy for adult high school diploma programs. Such programs have merely reacted to the pedagogical assumptions of secondary education. Adults are demonstrating that the ability to obtain a High School Diploma does not stop at the age of twenty-one. It is time adult educators recognize this fact and began to speak with our own voice on matters of program design and curriculum to provide a real opportunity for the adult learner to obtain his/her High School Diploma.

APPENDIX A

DEMOGRAPHIC DATA ON GRADE 12 STUDENTS

Identification Number	Days Absent	Total Days Present	Age	Sex	Work-ing	Last Yr. Day Sch.	Comp. Gates	Voc. Gates	RT Gates	LA ITED	RT ITED	Hrs.Abs.Ev. Sch.Prog.
001	13	115	18	1	2	'76	43	41	22		26	
002	22	106	18	2	1	'76	48	42	29		19	
003	8	120	18	2	1	'76	49	45	30		27	
004	28	100	17	2	2	'76	50	43	33		24	
005	5	123	18	2	2	'76	52	47	36		27	
006	16	112	19	1	2	'76	47	41	21		20	
007	0	128	18	2	2	'76	48	47	36		29	
008	5	123	17	1	2	'76	51	44	26		28	
009	3	125	19	2	1	'76	28	33	18		16	
010	0	128	18	2	2	'76	52	50	[illegible]		46	
011	7	121	18	2	2	'76	27	42	20		19	
012	9	119	18	2	2	'76	50	44	29		20	
013	7	121	17	1	2	'76	50	46	36		24	
014	4	124	18	1	2	'76	46	33	34		22	
015	7	121	18	2	2	'76	48	40	25		19	
016	4	124	18	2	2	'76	49	43	31		20	
017	11	117	18	1	1	'76	47	42	21		17	
018	5	123	18	1	2	'76	42	36	29		20	
019	5	123	19	1	2	'76	39	38	28		17	
020	5	123	18	2	1	'76	48	44	34		27	

APPENDIX B

DEMOGRAPHIC DATA FOR HSDP STUDENTS

Identification Number	Days Absent	Total Days Present	Age	Sex	Work-ing	Last Yr. Day Sch.	Comp. Gates	Voc. Gates	RT Gates	LA ITED	RT ITED	Hrs.Abs.Ev. Sch.Prog.
001	20	128	17	2	1	'76	49	46	34	15	42	0
002	63	128	21	1	1	'73	48	36	23	17	13	0
003	24	128	17	2	1	'76	47	42	24	15	17	0
004	37	128	19	1	1	'74	49	47	30	23	23	4
005	54	128	20	1	1	'72	42	40	24	39	30	0
006	76	128	20	2	1	'73	49	44	33	22	24	6
007	35	128	17	1	2	'75	49	45	35	31	27	4
008	9	128	17	2	2	'75	46	37	25	16	25	0
009	10	128	17	1	2	'75	52	48	26	24	42	0
010	11	128	18	2	2	'75	45	36	28	13	20	0
011	65	128	18	2	1	'75	43	42	27	28	24	0
012	11	128	17	2	2	'76	36	35	19	10	14	8
013	16	128	16	2	1	'76	51	44	31	22	34	0
014	64	128	21	1	2	'72	52	48	35	34	33	12
015	11	128	21	2	1	'72	49	31	20	14	26	0
016	11	128	17	2	1	'76	42	37	21	12	17	0
017	60	128	19	2	1	'75	52	47	30	20	21	7
018	57	128	22	1	2	'72	47	39	28	16	12	0
019	22	128	22	1	2	'72	36	35	24	11	15	0
020	12	128	30	1	1	'62	47	48	34	35	39	0

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